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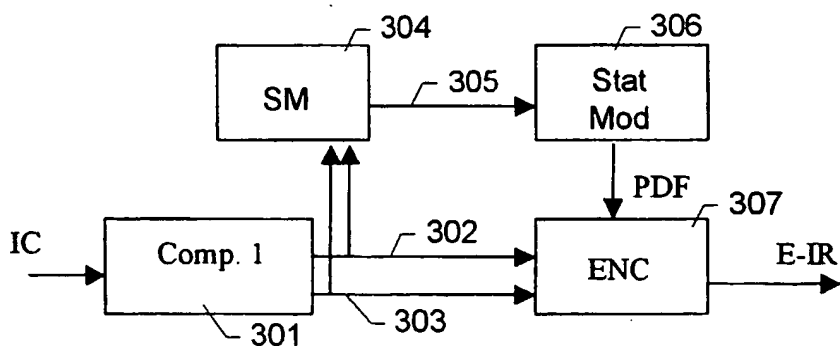
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(54) Title: OPTIMISED CODE GENERATION



(57) **Abstract:** A method of generating executable program code for a data processing system comprising an encoding stage for generating a compressed intermediate representation (E-IR) of an input code (IC) and a decoding stage for generating the executable code from the intermediate representation. The encoding stage comprises transforming (301) the input code including performing code optimization steps resulting in transformed code (302) and compiler information (303) about the transformed code; extracting (304,306) state information (305) of a statistical model and statistical information (PDF) from the transformed code and the compiler information; and encoding (307) the transformed code and the compiler information using the extracted state information and statistical information and resulting in the compressed intermediate representation. The decoding stage comprises decoding the intermediate representation resulting in the transformed code and the compiler information; and compiling the transformed code using the decoded compiler information and resulting in the executable code.

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